

Serial No.: 10/522,055

Office Action dated: November 16, 2007

Amendment dated: April 16, 2008

REMARKS

Reconsideration of this application and the rejection of claims 1-19 are respectfully requested. Applicant has attempted to address every objection and ground for rejection in the Office Action dated November 16, 2007 (Paper No. 20071101) and believe the application is now in condition for allowance. In the alternative, the claims are submitted to be in better form for appeal. The claims have been amended to more clearly describe the present invention.

Claims 1-5, 9-10, 14, 16 and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,904,308 to Frisch et al. in view of U.S. Publication No. 2004/0015075 to Kimchy et al. Applicant disagrees with and traverses this rejection for the following reasons.

Applicant maintains that a person of ordinary skill in the art would not be motivated to combine Frisch and Kimchy to achieve the claimed invention where there is no teaching or suggestion in these references to make such a combination. In the Office Action, the Examiner states:

In regards to applicant's arguments that one of ordinary skill in the art would not be motivated to combine Frisch and Kimchy, examiner respectfully disagrees. In Kimchy, paragraph [0116], Kimchy teaches that phase shift triangulation is a common technique employed in a variety of contexts, including radiofrequency applications. (See Page 2, ¶ 2).

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The Examiner argues that a person of ordinary skill in the art would be motivated to combine Frisch and Kimchy to achieve the claimed invention based on the fact that Kimchy teaches the use of phase shift triangulation in radiofrequency applications. However as stated in Applicant's Amendment filed on August 22, 2007, there are several reasons why a person of ordinary skill in the art would not combine Frisch and Kimchy to achieve the claimed invention.

Frisch discloses a system and method for locating an *in vivo* signal source which utilizes an ingestible capsule 100 and an antenna array belt 10 to estimate a position of the capsule inside a subject's body based on the signal strength measured by the antennas on the belt. (Col. 3, lines 10-22 and 60-65; FIGs. 1A, 2 and 3).

Kimchy discloses a radioactive emission detector 22 that is equipped with a position tracking system 24 for calculating the position of a radioactive emitting source in a subject's body (See the Abstract). Specifically, the radioactive emission detector 22 is positioned outside of the subject's body and is moved on the body to track the position of the radioactive emitting source inside the body (Figs. 9, 12; ¶ 0173). The position tracking system 24 monitors the position of the detector 22 in a two or three-dimensional space in calculating the position of the radioactive emitting source. (See ¶ 0112).

As stated above, Frisch discloses a system and method for determining the location of an ingested capsule 100 in a subject's body using

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signal frequencies. In contrast, Kimchy discloses a system for determining the position of a radioactive emitting source based on the detection of radioactivity and not signal frequencies.

Also, Frisch detects the location of the ingested capsule based on signal frequencies emitted from the capsule, whereas Kimchy determines the location of a radioactive emission source based on the position of the detector 22, which is outside of the body.

Further, Frisch discloses a system in which the capsule (the component that's position is being monitored) is not connected to the signal detectors (i.e., the antennas) whereas the detector 22 in Kimchy is connected to the position tracking system 24.

Based on these differences, Applicant submits that Frisch and Kimchy disclose different tracking methods. Therefore, a person of ordinary skill in the art would not be motivated to combine Frisch and Kimchy to teach the claimed invention, where there is no reason or suggestion in the references to make such a combination.

Even if Frisch and Kimchy are combined, the combination does not disclose or suggest the subject matter of amended claims 1 and 9.

Amended claim 1 includes the subject matter of claim 5 and recites, among other things, a method of non-invasive exploration for accessing the digestive motility intransient of a human or animal subject including the steps of

“providing an ingestible transmitting element, said transmitting element being non-digestible and containing a transmission means transmitting at a given fixed frequency” and “measuring a reference position when said transmitting element is in the mouth of the subject, before the subject swallows it.” The combination of Frisch and Kimchy does not disclose or suggest such subject matter.

Frisch discloses a method for located an in vivo signal source but does not disclose measuring a reference position of the signal source before it is swallowed such as when the signal source is in the subject’s mouth. The Examiner states that Frisch does disclose such subject matter at column 4, lines 64-65. This section of Frisch states that “[t]he point estimated to be the location of the signal source 100 in Fig. 6 is within the body.” The Examiner broadly interprets the phrase “within the body” to include the mouth as recited in amended claim 1. Applicant submits that this interpretation is incorrect. Looking at both Figs. 5 and 6 in Frisch, it is clear that the location of the signal source 100 is in the abdominal area of the subject thereby indicating that the subject has already swallowed the signal source. Thus, Frisch does not disclose or suggest measuring a reference position of the signal source before the signal source is swallowed by the subject as recited in amended claim 1. Furthermore, Frisch does not disclose or suggest measuring any type of reference position of the signal source. Similarly, Kimchy also does not disclose or suggest measuring a reference position of a transmitting element.

For at least these reasons, Applicant submits that amended claim 1, and the claims that depend therefrom, are each patentably distinguished over the combination of Frisch and Kimchy and in condition for allowance.

Amended claim 9 includes similar subject matter to amended claim 1. Specifically, amended claim 9 recites, among other things, a non-invasive exploration system for assessing the digestive motility and transient of a human or animal subject that includes “an ingestible transmitting element which cannot be digested by said subject containing a transmission means transmitting at a given fixed frequency” and “means for measuring a reference position when said transmitting element is in the mouth of a subject, before the subject swallows it.” As stated above, the combination of Frisch and Kimchy does not disclose or suggest measuring any type of reference position, and more specifically, measuring a reference position before the subject swallows the transmitting element.

Accordingly, Applicant submits that amended claim 9, and the claims that depend therefrom, are each patentably distinguished over the combination of Frisch and Kimchy and in condition for allowance.

Claims 12, 13 and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Frisch, Kimchy and in further view of WO 01/5094 to Refael. Claims 12, 13 and 15 depend from amended claim 9. Applicant therefore submits that claims 12, 13 and 15 are patentably distinguished over the combination of

Frisch, Kimchy and Refael for at least the reasons provided above with respect to amended claim 9. Furthermore, Refael does not disclose or suggest “measuring a reference position [of a] … transmitting element … before the subject swallows it,” “determining, by triangulation on the basis of the three phase-shift measurements, a 3D position of said transmitting element” and “defining, according to the 3D position of said transmitting element, a data for an assessment of the digestive motility and transit” in a person’s body. Accordingly, Applicant submits that claims 12, 13 and 15 are each patentably distinguished over the combination of Frisch, Kimchy and Refael and in condition for allowance.

Claims 7 and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Frisch, Kimchy and in further view of U.S. Patent No. 5,415,181 to Hogrefe et al. Claim 7 depends from amended claim 1 and claim 18 depends from amended claim 9. Applicant therefore submits that claims 7 and 18 are patentably distinguished over the combination of Frisch, Kimchy and Hogrefe for at least the reasons provided above with respect to amended claims 1 and 9. Furthermore, Hogrefe discloses a biomedical monitoring system using AM and FM signal transmission. Hogrefe does not disclose or suggest “measuring a reference position [of a] … transmitting element … before the subject swallows it,” “detemining, by triangulation on the basis of the three phase-shift measurements, a 3D position of said transmitting element” and “defining, according to the 3D position of said transmitting element, a data for an assessment

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of the digestive motility and transit" in a person's body as presently claimed.

Accordingly, Applicant submits that claims 7 and 18 are patentably distinct from the combination of Frisch, Kimchy and Hogrefe and in condition for allowance.

Claims 8 and 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Frisch, Kimchy and in further view of WO 00/22975 to Iddan et al. ("Iddan I"). Claim 8 depends from amended claim 1 and claim 19 depends from amended claim 9. Therefore, Applicant submits that claims 8 and 19 are patentably distinguished over the combination of Frisch, Kimchy and Iddan I for at least the reasons provided above with respect to amended claims 1 and 9. Furthermore, Iddan I discloses a method for delivering a device to a target location in a gastrointestinal track using a camera system. The Examiner states that Iddan I discloses the subject matter of claims 8 and 19 on page 5, lines 10-15, which states "delivering the sensing and utility device to a target location identified on the map, using the sensing and utility device in a second pass or, optionally, a plurality of passes, through the gastrointestinal tract. The searching and utility device used in the second pass, may be the same or different from the device used in the first pass."

In contrast, claim 8 recites that the "subject ingest several transmitting elements over a period of time, each transmitting element having a characteristic frequency." Iddan I does not disclose or suggest that its utility devices have their own "characteristic frequency." Accordingly, Applicant

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submits that claims 8 and 19 are each patentably distinguished over the combination of Frisch, Kimchy and Iddan I and in condition for allowance.

Claims 6 and 11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Frisch, Kimchy and in further view of European Patent No. 0667115 to Iddan et al. (“Iddan II”). Claim 6 depends from amended claim 1 and claim 11 depends from amended claim 9. Therefore, Applicant submits that claims 6 and 11 are patentably distinguished over the combination of Frisch, Kimchy and Iddan II for at least the reasons provided above with respect to amended claims 1 and 9. Furthermore, Iddan II discloses an in vivo video camera system. Iddan II does not disclose or suggest “measuring a reference position [of a] … transmitting element … before the subject swallows it,” “determining, by triangulation on the basis of the three phase-shift measurements, a 3D position of said transmitting element” and “defining, according to the 3D position of said transmitting element, a data for an assessment of the digestive motility and transit.” Accordingly, Applicant submits that claims 6 and 11 are each patentably distinguished over the combination of Frisch, Kimchy and Iddan II and in condition for allowance.

New claim 20 recites a method of non-invasive exploration for assessing the digestive motility and transient of a human or animal subject that includes the steps of providing a plurality of ingestible transmitting elements, each of the transmitting elements being non-digestible and containing a transmission

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means transmitting at a given fixed frequency, swallowing the ingestible transmitting elements over a period of time, measuring, at a given time using at least three reception means distributed on the subject's trunk, the phase-shift of the frequency transmitted by each of the transmitting means relative to a reference phase to obtain three phase-shift measurements, determining, by triangulation on the basis of the three phase-shift measurements, a 3D position of each of the transmitting elements, and defining, according to the 3D position of the transmitting elements, data for assessment of the digestive motility and transient. As stated above, the cited references do not disclose or suggest the subject matter of new claim 20, and more specifically, the steps of providing a plurality of ingestible transmitting elements each having a given fixed frequency that is swallowed over a period of time.

For at least these reasons, Applicant submits that new claim 20 is patentably distinguished over the cited references and in condition for allowance.

Applicant submits that in view of the above-identified amendments and remarks, the claims in their present form are patentably distinct over the art of record. Allowance of the rejected claims is respectfully requested. In the alternative, the claims are submitted to be in better form for appeal. Should the Examiner discover there are remaining issues which may be resolved by a

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telephone interview, the Examiner is invited to contact Applicant's undersigned attorney at the telephone number listed below.

Respectfully submitted,

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April 16, 2008

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